

Grape skin compound fights the complications of diabetes

Research carried out by scientists at the Peninsula Medical School in the South West of England has found that resveratrol, a compound present naturally in grape skin, can protect against the cellular damage to blood vessels caused by high production of glucose in diabetes, according to a paper published in the science journal “Diabetes, Obesity and Metabolism” this week.

The elevated levels of glucose that circulate in the blood of patients with diabetes causes micro- and macrovascular complications by damaging mitochondria, the tiny power plants within cells responsible for generating energy. When they are damaged they can leak electrons and make highly damaging ‘free radicals’.

Complications that can result when this happen include nephropathy (kidney disease), heart disease and retinopathy (which if left untreated can lead to blindness).

Resveratrol stops the damage by helping cells make protective enzymes to prevent the leakage of electrons and the production of toxic ‘free radicals’.

As well as being naturally present in grape skins, resveratrol is also present in seeds, peanuts and red wine.

Dr. Matt Whiteman, Principal Investigator and Senior Lecturer at the Institute of Biomedical and Clinical Science, Peninsula Medical School, commented: “Resveratrol’s antioxidant effects in the test tube are well documented but our research shows the link between high levels of glucose, its damaging effect on cell structure, and the ability of resveratrol of protect against and mend that damage.”

He added: “Resveratrol or related compounds could be used to block the damaging effect of glucose which in turn might fight the often life threatening complications that accompany diabetes. It could well be the basis of effective diet-based therapies for the prevention of vascular damage caused by hyperglycaemia in the future.”

Source: The Peninsula College of Medicine and Dentistry

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